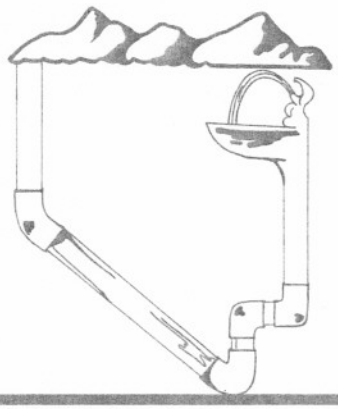
Water Lines



Water Lines is the resource newsletter and calendar of the Nevada Drinking Water and Wastewater Training Coalition.

Volume 10 Summer 2003 issue

Inside this issue....

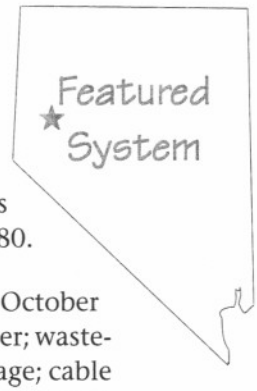
Water Lines is funded by **Rural Community Assistance Corporation** through a contract with the Nevada State Health Division.

Editor, Abigail Johnson, RCAC

Editor and Production, Julia Helmreich, RCAC

Featured System: Canyon GID

By Philip Walsack, Rural Community Assistance Corporation



Canyon General Improvement District serves 345 residential and four commercial accounts in northern Storey County. Canyon GID, servicing the Rainbow Bend community, is located about five miles east of Sparks on Interstate 80.

The GID was formed in October 1992 to provide potable water; wastewater disposal; storm drainage; cable television; street maintenance; and garbage collection for the unincorporated area of Rainbow Bend. Full build-out of the community is 410 units.

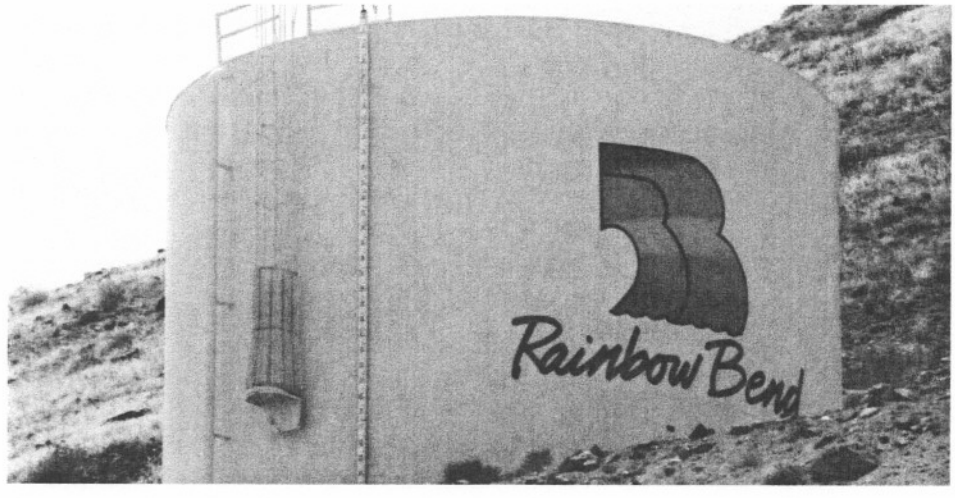
Today, the Rainbow Bend community is an alternative to Reno's city lifestyle. The community overlooks the Truckee River with a backdrop of volcanic mountains and canyons of the Virginia and Pah Rah Ranges. The quick commute to Reno makes this community ideal for people who like a scenic setting.

The GID, using funds from the Nevada State AB 198 Grant Program and matching funds from USDA-Rural Development, has undertaken a major water infrastructure improvement project. It is planning to secure a second source of supply (a new groundwater well); build an additional storage tank; and upgrade its water treatment facility.

In the past, the community had only one source of supply, a groundwater well located just west of the community. The well was drilled in 1985. It is 160 feet deep and features 8-inch casing. It is capable of producing 230 gpm, although the District is currently pumping at 180 gpm. The well is controlled by telemetry located at the storage tank.

The groundwater from the District's well is treated due to concentrations

(Continued on page 4)



On your next trip through the Truckee River Canyon, look off to the south side of I-80 for the 356,00-gallon water storage tank with the Rainbow Bend logo.

Please Help Us! ***Thank You!***

If you receive more than one copy of Water Lines or if your address is incorrect, please e-mail Sharon Fowler at RCAC at sfowler@rcac.org or call her at 916/447-9832 ext. 105.

Well attended Nevada Rural Water Conference is a success

By Georgia Greenrod, Nevada Rural Water Association

The conference this year was the best attended in the Association's history. More than 86 systems and six tribes were represented, and the conference featured a wonderful array of speakers. All the agencies were represented and really made the training a success.

A BIG thanks to: EPA Region 9, USDA staff, BHPS staff, NDEP staff, UNR Staff, TMWA staff, Sierra Pacific Power, Western Nevada Supply hands-on class staff and all the volunteer speakers for contributing to the success of the training classes. Security was a main topic at the conference, and Martha Bryan's motivation classes were a nice addition this year. We also appreciated having National Rural Water Association represented at our conference.

Many different courses were offered this year, including backflow prevention; sewage sludge disposal; math, water rights; loans and grants; project procedures; underground injection control; certification review; lab testing and many more.

Many participants suggested classes to be offered next year, such as financial matters for boards and commissioners; water filtration contaminate removal; excavation demonstrations; gas chlorination; CL2 injection; and more hands-on courses. We hope to have these on the agenda for next year as well as a variety of new subjects.

Award winners

Water Operator

Dan Bliss,
City of Ely

Wastewater Operator

Annette Slagowski,
City of West Wendover

System Manager

Diana Langs,
Sun Valley GID

Scholarship

Brittany Smith,
City of Wells

Congratulations to all those who passed tests. The 2004 Conference is scheduled for March 9 – 12 at John Ascuaga's Nugget.

The Spigot Q & A

Q.1. What factors influence trihalmethane (THM) production?

A.1. Time, temperature, pH, and the types and concentrations of chemicals.

Q.2. How do higher temperatures and pH influence THM production?

A.2. The higher the temperature and the higher the pH, the faster the production of THM.

Q.3. How are flows measured with Venturi meters?

A.3. Flows are measured with Venturi meters by sensing the pressure differential between the water pressure before the restriction in the meter or tube and the pressure within the restriction.

Q.4. What is a sensor?

A.4. A sensor is the primary element that measures a variable. The sensor is often a transducer of some type that converts energy of one kind into some other form to produce a readout or signal.

Q.5. How does a bubbler measure the level of a liquid?

A.5. A bubbler measures the level of a liquid by sensing (measuring) air pressure necessary to cause bubbles to just flow out the end of the tube.

Source for all of the above questions: Water Treatment Plant Operation Vol I and II, K. Kerri

The Spigot *features Q&A on a variety of topics with typical certification exam questions. Crystel Montecinos, Program Development Specialist with the UNR Cooperative Extension, prepares* The Spigot.

Meet Us in Portland, Oregon!

The RCAC 2004 Conference

March 22-24, 2004

Sharing Our Gifts: Celebrating Our Diversity

Mark your calendar for March 22-24, 2004 to attend the RCAC 2004 Conference in Portland, Oregon. The Conference will feature sessions on:

- Rural policy
- Water systems management and operations
- Organizational management and operations
- Financing & tax credits
- Leveraging resources
- And much more!

Visit our web site at *www.rcac.org* for more details. Call RCAC at 916/447-2854 to be added to our conference mailing list. See you in Portland!

Effective maintenance programs keep systems in top running condition

By Kyle Menath,Carson City Utilities Department

Lack of good maintenance can result in serious public health hazards, and damage to private property and main lines. It also could expose your utility to liability suits that arise from such hazards. An effective maintenance program will keep your system in good operating condition, so that it functions efficiently throughout its design life.

Preventive maintenance

There are two types of maintenance — preventive and corrective. Preventive includes scheduling maintenance and collection system inspections and examining the system's past history. The scheduled maintenance frequency should be modified due to the type of industry and number of rental properties and number of restaurants in an area. These factors help to determine the type, degree and frequency of preventive maintenance. Preventive maintenance improves service, reduces emergency occurrences and minimizes costs.

Corrective maintenance

Corrective maintenance often refers to emergency maintenance. This can include the complete failure of the sewer as in a collapse, a stoppage due to an inadequate frequency of preventive maintenance or excessive inflow or infiltration. These conditions require immediate action to correct the problems.

In general, the greater the amount of preventive maintenance performed, the less the amount of corrective maintenance required. However, there should be a reasonable balance between the cost of preventive maintenance and the corresponding benefit derived. While no precise method is available to determine exactly how much preventive maintenance is needed, a review of historical maintenance costs on similar facilities is a useful guide for planners and designers.

The design of a sewer main greatly affects the amount of preventive maintenance required to provide good service. Slopes and sizing of the mains are critical to sustain flows that will carry the sewer and its suspended materials through to the treatment plant. Proper sewer main inspection, construction and testing will eliminate infiltration, root intrusion and materials settling in the main.

> LACK OF GOOD MAINTENANCE CAN RESULT IN SERIOUS PUBLIC HEALTH HAZARDS, AND DAMAGE TO PRIVATE PROPERTY AND MAIN LINES.

Pipeline maintenance is generally performed by rodding (a mechanical method using rotational torque applied to a tool that is attached to a steel rod and run through a sewer main); hydraulic jetting (high pressure water forced through a hose and nozzles aimed at an angle to the sewer main, which washes the attached debris from the pipe walls); or flushing (dumping large quantities of water into the main, which flushes settled matter downstream). Many other methods of maintenance can be used, including balling, scooters, kites, bags, pigs and bucketing. The condition of the sewer main will determine what methods work best.

(Continued on page 4)

New Nevada operators certified

These operators passed entry level water certification exams for distribution grades 1 & 2 and treatment grades 1 & 2. Congratulations to all!

Distribution grades 1 & 2

Nathan Adams, D-1; Kevin Agrella, D-1; Richard Betty, D-1; Jeff Biel, D-1; Mathew Brower, D-1; Kevin Comphel, D-1; John Corso, D-1; Michael Didonato, Jr., D-1; Jonathan Farnsworth, D-1; Robert Folen, D-1; Louis Foster, D-1; Darrin Garland, D-1; Kenneth Green, D-1; Gilbert Gurule, D-1; Kenneth Howard, D-1; Robert Huening, D-1; Steven Jerome, D-1; James Klapper, D-1; David Linge, D-1; Mike Love, D-1; Steven Lujan, D-1; Scott Margetts, D-1; Paul Miller, D-1; Erika Moonin, D-1; Michael Newton, D-1; Jerry Pyatt, D-1; Brett Reed, D-1; Eugene Rockwell, D-1; Eric Sautter, D-1; Todd Saxberg, D-1; David Selby, D-1; Max Shen, D-1; Robert Siqueiros, D-1; Dennis Southfield, D-1; David Spencer, D-1; Dino Tomburello, D-1; Peter Willenberg, D-1; Roderick Williams, D-1; Dave Wong, D-1; Mary Zanardi, D-1; Stephen Anderson, D-2; James Cole, D-2; Ryan Dixon, D-2; Geoffrey Haines, D-2; Christoher Hires, D-2; Larry Jackson, D-2; Paul Miller, D-2; Craig Moyle, D-2; Raul Naranjo, D-2; Walter Raymond, D-2; Claude Rose, D-2.

Treatment grades 1 & 2

Larry Evans, T-1; Darrin Garland, T-1; Daniel Moran, T-1; Robert Murray, T-1; Eugene Rockwell, T-1; David Tucker, T-1; Eric Wert, T-1; Ryan Dixon, T-2; Geoffrey Haines, T-2; Kylie Hatch, T-2; Ralph Hubner, Jr., T-2; Darren Kitzmiller, T-2; Jeff Kollodge, T-2; Paul Miller, T-2; David Musselman, T-2; Walter Raymond, T-2; Claude Rose, T-2.

Featured System

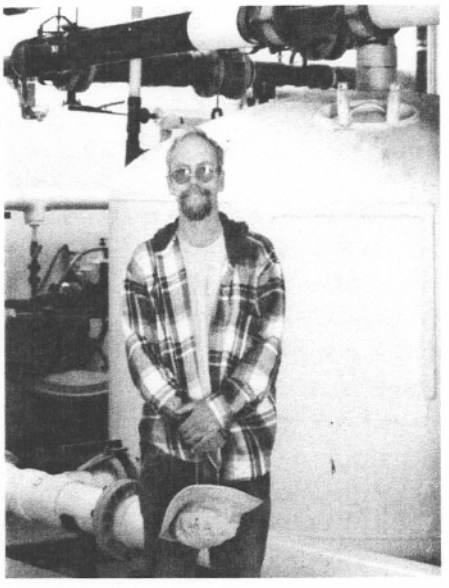
(continued from page 1)

of arsenic, boron, iron and manganese. The source water is treated with an oxidation filtration system. There are three vessels containing greensand that facilitate the oxidation process. Although the treatment plant has served the community well, it is 15 years old and is in need of rehabilitation and upgrading.

Canyon's new well is being pump tested.

The community grew by about 20 homes per year until recent water supply issues slowed the growth rate considerably. Historically, average residential water use was 574 gallons per day. This is relatively high, even for an unmetered system. Now that water meters have been installed, water usage will likely decrease.

The District has drilled a new well and is awaiting water quantity and quality results. The well has been pump tested and could serve the community with as much as 500-800 gallons per minute. The District's hydrogeologists are closely reviewing the aquifer's water bearing characteristics to optimize the well's performance. Pending water quality analytical results may prove that water quality meets regulatory requirements without treatment.



Steve Palmer is Canyon GID's operator.

A 356,000-gallon water storage tank is located on a hillside just west of the community and provides a baseline pressure of approximately 68 psi to customers. The tank was built in 1986. The District is planning to add an additional 400,000 gallon storage tank.

In past years, the GID's board saw its fair share of turmoil. Now, public meetings are leading to positive changes for the community. The GID board has improved the district's fiscal viability and set a course of capital improvements and construction projects that will benefit its customers. The community is now fully metered and customers are charged using a metered rate.

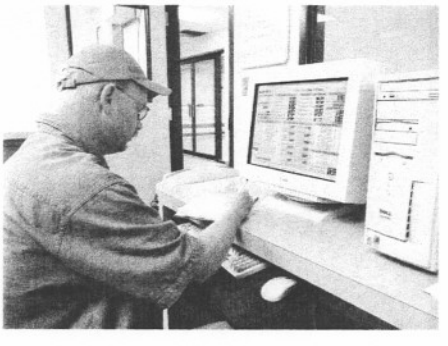
The district uses four technical assistance providers, including Nevada Rural Water Association; Farr West Engineering; Arasmith Consulting Resources; and Rural Community Assistance Corporation.

The Canyon GID is working hard to deliver water, wastewater and television services to it residents.

Maintenance

(Continued from page 3)

Closed circuit television is an extremely useful tool in determining the effectiveness and type of maintenance needed. Televising gives us a look at the inside of the lines, and aids us in determining the health of the main and whether



the line needs maintenance, repair or replacement. On many occasions, televising a utility can save money and postpone a replacement program in an area by locating the exact nature of a problem and applying spot repairs to the inside of the pipeline without digging and causing major disturbances to roadways and the public.

Root and grease chemicals can lengthen the useful life of a main by eliminating blockages. These chemicals are usually hazardous to employees, the treatment process and the environment, so their use should be carefully controlled. Employees that apply them should be properly educated in their safe use.

All sewer collection systems consist of buried pipelines that vary in type, age and condition, which are the deciding factors in the frequency and type of maintenance needed. The use of mechanical rodding, jetting, and flushing is necessary for a properly functioning sewer system. No system can go without maintenance, but perhaps the most important tool that can be used to assist in the maintenance of the sewer collection system is public education.

Code of Ethics for Public Water System Operators

In the profession of water system operations (water treatment and/or distribution systems), a high standard of integrity, skill and practices to safeguard the life, health, property, environment and welfare of the public *must* be maintained. While this code is not a regulatory requirement, every person holding certification as a water treatment and/or distribution operator in Nevada should act in a fiscally and ethically responsible manner and have knowledge of, understand and abide by this code of professional conduct.

1. The operator shall recognize that his/her primary obligation is to *protect the safety, health, and welfare of the public in the performance of his/her duties* at all times. If the operator's judgment is overruled under circumstances where the safety, health and welfare of the public are endangered, the operator will inform his/her employer of the possible consequences and notify such other proper authority over the situation as may be appropriate.

2. The operator shall accept and perform water operations only when qualified by education and experience in the specific technical area and level of water operations involved. The operator may accept an assignment requiring education or experience outside of his/her field of competence, but only under the direct supervision of properly certified and qualified coworkers, consultants or employees.

3. The operator shall be objective and truthful in all professional reports, statements or testimony and will include all relevant and pertinent information.

4. The operator shall avoid conflicts of interest with employers or customers. If there is a question of conflict of interest, the operator shall promptly and fully disclose the circumstances. An operator shall not influence the decision of his/her employees' work for any public body on which the operator may serve.

5. The operator will exercise good judgment and stay within full compliance of the employer's policies when offered valuable items or gratuities while dealing with vendors, consultants, customers or contractors.

6. The operator shall not falsify his/her academic or professional qualifications and/or experience. The operator shall not misrepresent or exaggerate his/her degree of responsibility in prior assignments, duties or accomplishments to enhance his/her qualifications and work.

7. The operator shall not knowingly associate with or permit the use of his/her name or employer's name in a business venture by any person or company which he/she knows or has reason to believe is engaging in business or professional practices of fraudulent or dishonest nature.

8. If the operator has knowledge or reason to believe that another person or water company may be in violation of any of these rules, the operator shall present such information to the Nevada State Health Division, Bureau of Health Protection Services in writing and shall cooperate fully by furnishing information or assistance, as may be required.

Note: the Nevada Advisory Board for the Certification of Operators adopted a Code of Ethics for Public Water System Operators at its March 6 meeting. Operating a public water system requries high standards of knowledge, skill, practices and integrity to ensure that customers receive safe water. Water system operators are caretakers of the environment, and of the life, health, property and welfare of the public. While this code is not a regulatory requirement, the Advisory Board recommends that operators be familiar with, and follow, its guidance — Galen Denio, Nevada State Health Division.

Resource Round-up

Free job listings on the Internet

The University of Nevada lists water-related job opportunities in Nevada on the Source Water Protection web site.

The listing is free! If your drinking water or wastewater system has a job opening, let us know. The Source Water Protection web site, sponsored by the Nevada Bureau of Health Protection Services through the Safe Drinking Water State Revolving Fund, is at *www.unce.unr.edu/swp*. To list an opening or for more information, please contact Crystel Montecinos at 775/784-6853 or at xtelle@cabnr.unr.edu.

Useful web sites

Check out the following web sites for up-to-date information and resources for your utility.

American Water Works Association
www.awwa.org/

California-Nevada AWWA
www.ca-nv-awwa.org

California Rural Water Association
www.calruralwater.org

Environmental Technology Verification Program
www.epa.gov/etv/

Local Government Environmental Assistance Network
www.lgean.org/

National Environmental Services Center
www.nesc.wvu.edu

Rural Community Assistance Corporation
www.rcac.org

Nevada Rural Water Association
www.nvrwa.org

Rural Community Assistance Program
www.rcap.org

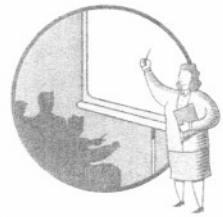
State Health Division Operator Certification Information
http://health2k.state.nv.us/bhps/phe/cert.htm

Tech Briefs offered

The National Drinking Water Clearinghouse offers 4-page fact sheets with technical information about drinking water treatment technology for small systems. To order a free collection of *Tech Briefs* in a 3-ring binder, contact the NDWC at 800/624-8301 or 304/293-4191 and request item #DWPKPE71, or download *Tech Briefs* from the NDWC web site at *www.nesc.wvu.edu/ndwc/ndwc_tb_available.htm*.

BHPS offers Bioterrorism Act Training

The Nevada Bureau of Health Protection Services (BHPS) is offering Bioterrorism Act training courses for community water system staff. BHPS will offer the training at no cost, and it is open to all drinking water utilities. Participants will learn how to complete a comprehensive vulnerability assessment using EPA's six-step methodology; and how to develop an emergency response plan for their utilities.



BHPS contractor Custer Battles will contact each water system to schedule the training. For more information, contact Larry Rountree at 775/687-6615 ext. 239.

UNR – Colleges of Agriculture, Biotechnology, and Natural Resources & Cooperative Extension

Videoconference Training Calendar 2003

UNR videoconference classes on water systems operation, maintenance and management — Reno and rural locations — For information, registration and locations call Crystel Montecinos at 775/784-6853 or email: xtelle@cabnr.unr.edu. Upcoming classes:

August 21 — Water Monitoring Requirements and Water Sampling Techniques

September 5 — Certification Examination Preparation and Review

Community College of Southern Nevada Wastewater & Water Technology Program

Info: LeAnna Risso, 702/434-6600 ext. 6418.

WWET training in Clark County

Info: Gladys Alford, 702/258-3834; see *www.wwet.org* for a current training calendar.

State of Nevada Water Certification Exams

All exams will be proctored some time during the week of the date listed. Applications are due to the state (Steve Brockway) 30 days before exam dates. A proctor will contact examinees to schedule testing. 2003 exam dates are Sept. 8 and Dec. 1. Info: Debra Kaye, 775/834-8114.

Wastewater Certification Board testing

Wastewater certification exams will be given the second Thursday in July and October; call for locations. Info: 702/433-1498 *or www.nvwea.org.*

Training Calendar 2003-2004

July 9—Austin—NvRWA Arsenic training, 8-10 a.m., (2 hrs). Info: 775/783-7225.

July 9—Austin—NvRWA Radon training, 10 a.m.-noon, (2 hrs). Info: 775/783-7225.

July 16—Elko—NvRWA Pump Curves/Pump Efficiency, 9 a.m.-noon, (3 hours). Info: 775/783-7225.

July 16—Elko—NvRWA Electrical Troubleshooting, 1-3 p.m., (2 hours).Info: 775/783-7225.

July 30—Pahrump—NvRWA Consumer Confidence Reports, 9 a.m.-noon, (3 hours).Info: 775/783-7225.

August 6—Incline Village—NvRWA Fire Hydrant Repair/Maintenance, 1-3 p.m., (2 hours). Info: 775/783-7225.

August 20—Yerington—NvRWA Procurement/Mgmt. of Engineering & Construction Grants, 9 a.m.-noon, (3 hours). Info: 775/783-7225.

September 3—Ely—NvRWA Fire Hydrant Re-pair and Maintenance, 9 a.m.-noon, (3 hours). Info: 775/783-7225.

September 19—Hawthorne—NvRWA Backflow & Cross-Connection, 9 a.m.-noon, (3 hours). Info: 775/783-7225.

September 25-27—Laughlin—Tri-State Seminar on the River — Topics include security; surface and ground water; distribution; wastewater treatment and collection;and other topics. Info: Annette Duarte, 520/740-6539, or go to *www.tristateseminar.com.*

September 26—Laughlin—Operator Certification Advisory Board Meeting in conjunction with the Tri-State Seminar, 9 a.m. at the Big Bend Water District Office, 1520 Thomas Edison Drive. Info: 775/687-4750 ext. 267.

October 1—Eureka—NvRWA System Security Assessments/Emergency Response, 9 a.m. - noon, (3 hours). Info: 775/783-7225.

October 6-10—San Diego, CA—CA-NV AWWA Fall Conference at the Sheraton San Diego Hotel and Marina. Info: 909/481-7200.

October 10—San Diego, CA—CA-NV AWWA Smaller Utilities Day. Info: 909/481-7200.

October 8—Tonopah—NvRWA Wellhead Protection, 1-3 p.m., (2 hours). Info: 775/783-7225.

October 9—Yerington—NvRWA Cla-Val, 8 a.m. - noon, (4 hours).Info: 775/783-7225.

** Please note that one hour of training is .1 ceu.*

October 9—Panaca—NvRWA Fire Hydrant Repair & Maintenance, 9 a.m. - noon, (3 hours). Info: 775/783-7225.

November 5—Wells NvRWA System Security Assessments/Emergency Response, 9 a.m.-noon, (3 hours). Info: 775/783-7225.

November 5—Wells—NvRWA Procurement/Mgmt. of Engineering & Construction Grants, 1-3 p.m., (2 hours). Info: 775/783-7225.

November 6—Reno—CA-NV AWWA Satellite Teleconference on Water Quality, UNR Getchell Library projection room. Info and registration: Stephanie Mendoza, 909/481-7200.

November 19—Eureka—NvRWA Pump Curves & Pump Efficiency, 9 a.m.-noon, (3 hours). Info: 775/783-7225.

November 19—Eureka—NvRWA Electrical Troubleshooting, 1-3 p.m., (2 hours). Info: 775/783-7225.

December 10—Hawthorne—NvRWA Arsenic, 8-10 a.m., (2 hours). Info: 775/783-7225.

December 10—Hawthorne—NvRWA Radon, 10 a.m.-noon, (2 hours).Info: 775/783-7225.

December 10—Hawthorne—NvRWA Fire Hydrant Repair & Maintenance, 1-3 p.m. (2 hours). Info: 775/783-7225.

December 17—Pioche—NvRWA Consumer Confidence Reports, 9 a.m. - noon, (3 hours). Info: 775/783-7225.

January 7 — Round Mountain/Hadley— NvRWA Consumer Confidence Reports, 9 a.m. - noon, (3 hours). Info: 775/783-7225.

January 21—Pahrump—NvRWA System Security Assessments/Emergency Response, 9 a.m. - noon, (3 hours). Info: 775/783-7225.

January 21—Pahrump—NvRWA Solid Waste Management/Groundwater Protection, 1 - 3 p.m., (2 hours). Info: 775/783-7225.

January 29—Laughlin—NvRWA Fire Hydrant Repair & Maintenance, 9 a.m. - noon, (3 hours). Info: 775/783-7225.

February 19—Pahrump—NvRWA Fire Hydrant Repair & Maintenance, 9 a.m. - noon, (3 hours). Info: 775/783-7225.

March 9-12, 2004—Sparks—NvRWA annual technical conference. Info: 775/783-7225.

March 22-24, 2004—Portland, OR—RCAC national rural development conference. Info: 916/447-2854.

This symbol designates training pre-approved by the Nevada State Health Division for continuing education units (CEU) credit. Other training may be eligible for CEUs but is not yet pre-approved. Before attending any training, contact the Health Division at 775/687-6615 ext. 235 for approval. Ten hours of approved training equals 1 CEU. A different ratio applies for safety training. Contact Steve Brockway at 775/687-6615 ext.235 for details.

Nevada Drinking Water and Wastewater Training Coalition

American Water Works Association California/Nevada Section
www.ca-nv-awwa.org
Philip Walsack, Smaller Utilities Committee Chair, 775/882-8887
Nicole Schreuder, education mgr., 909/291-2101

Indian Health Service
Dominic Wolf, 775/784-5327

Nevada Division of Environmental Protection
www.state.nv.us/ndep/index.htm
Nevan Kane — Wellhead Protection, 775/687-9426
Jon Palm — AB 198 Water Grant Program, 775/687-9433

Nevada Rural Water Association
www.nvrwa.org
Jon Anderson, 888/884-2055
Curtis Duff, 888/884-2055
Bob Foerster, 775/721-7972
Georgia Greenrod, 888/884-2055
Jonn Scovil, 888/884-2055

Nevada State Health Division
www.state.nv.us/health/bhps
775/687-6615
Jim Balderson, SWAP, ext. 228
Adele Basham, DWSRF, ext. 265
Steve Brockway, CEU approval, ext. 235
Galen Denio, ext. 229
Dana Pennington, ext. 237

Nevada Water Environment Association
www.wef.org
Bruce Johnson, 702/369-6175
Starlin Jones, 775/861-4104
Rick Warner, 775/954-4621

Public Utilities Commission of Nevada
www.state.nv.us/puc
Steve McGoff, Utility Engineer, 775/687-6040

Rural Community Assistance Corporation
www.rcac.org
John Dailey, 775/882-8887
Abby Johnson, 775/882-0296
Lisa Thayer, 775/882-8887
Philip Walsack, 775/882-8887

U.S. Environmental Protection Agency, Region 9
www.epa.gov/region09
Marvin Young, 415/972-3561

USDA-Rural Development
www.usda.gov/rus/water/index.htm
Mike Holm, 775/887-1222, ext. 26
Kay Vernatter, 702/262-9047 ext. 113

University of Nevada, Reno Dept. of Civil Engineering
Dean Adams, 775/784-1474

UNR Environmental & Resource Sciences and Nevada Cooperative Extension
www.unce.unr.edu/swp
Mark Walker, 775/784-1938

Water/Wastewater Education and Training Consortium of Southern Nevada — WWET
www.wwet.org
Marie Pollack, Chair, 702/298-3113
Gladys Alford, Registrar, 702/258-3834

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Nevada Drinking Water and Wastewater Training Coalition

Water Lines

Summer 2003

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